

WHAT IS CLAIMED:

1. A vehicle comprises a fuel cell power system mounted on said vehicle for providing electrical power, heat and water to said vehicle, said vehicle comprising a hydrogen-powered fuel cell mounted on said vehicle, a system for delivering relatively pure hydrogen to said fuel cell, a path from said fuel cell for delivering electrical power to said vehicle, a path from said fuel cell for delivering water to said vehicle, and a path from said fuel cell for delivering heat to said vehicle.
2. The vehicle of claim 1 further comprising a fuel processor that delivers relatively pure hydrogen to said fuel cell, said fuel processor being mounted on said vehicle.
3. The vehicle of claim 1 further comprising outlets for delivering heated air derived from said fuel cell to areas alongside said vehicle.
4. The vehicle of claim 1 further comprising heat exchanger means for extracting heat from the heat output of said fuel cell, and for

entraining said heat in air for delivery to said vehicle.

5. The vehicle of claim 1 further comprising a separator linked to the water outlet of said fuel cell for extracting water from the air-water mixture from said fuel cell.
6. The vehicle of claim 1 further comprising a fuel cell processor connected to said fuel cell, and a reformer in said fuel processor, said reformer producing said relatively pure hydrogen.
7. The vehicle of claim 1 further comprising a fuel processor, and a reformer in said fuel processor, said vehicle further including a heat exchanger that extracts heat from said fuel processor, and then delivers said heat through appropriate paths to desired areas of said vehicle.
8. The vehicle of claim 1 further comprising storage for relatively pure hydrogen mounted on said vehicle, said storage being linked to said fuel cell for delivery of relatively pure hydrogen to said fuel cell.

9. The vehicle of claim 1 wherein said fuel cell is a direct-fuel fuel cell, and wherein said vehicle includes a storage system for said direct-fuel mounted on said vehicle.
10. The vehicle of claim 1 further comprising a storage facility for storing liquefied propane aboard said vehicle.
11. The vehicle of claim 1 further comprising a fuel processor, said fuel processor generating heat and rejected flammable gases.
12. The vehicle of claim 11 wherein said fuel processor further comprises a hydrogen purifier.
13. The vehicle of claim 1 further comprising a fuel processor, said fuel processor including a hydrogen purifier.
14. The vehicle of claim 13 further comprising a gas accumulation reservoir that receives rejected flammable gases from said hydrogen purifier, and rejected hydrogen and other flammable gases from said fuel cell, for use in a burner device for producing heat.

15. The vehicle of claim 1 further comprising fuel cell electronics and balance of plant for said fuel cell.
16. The vehicle of claim 1 further comprising a path from said fuel cell to a converter for changing the voltage, amperage, or both, of electrical power from said fuel cell, and from said converter, a path to power-consuming means within or outside of said vehicle.
17. The vehicle of claim 1 further comprising a fuel cell selected from the group consisting of polymer electrolyte membrane, phosphoric acid, alkaline, solid oxides, and molten carbonate fuel cells, or, alternatively, absent a fuel processor, further comprising a source of relatively pure hydrogen, metal hydrides, or a nanotube storage system.
18. The vehicle of claim 1 further comprising a heat exchange system that delivers heat to an absorption refrigeration system or to an absorption cooling system.
19. The vehicle of claim 1 further comprising systems for delivering

flammable fuels from hydrogen purifiers, fuel cell stacks, or both, and for delivering mixtures of rejected flammable fuels from purifiers, fuel cell stacks, or both, to a burner in an absorption refrigeration system or in an absorption cooling system.

20. The vehicle of claim 1 further comprising apparatus for storing pressurized hydrogen on said vehicle.
21. The vehicle of claim 1 further comprising a system for receiving hydrogen from external sources.
22. The vehicle of claim 1 further comprising a system for receiving hydrogen from external reformer systems and internal purifier systems, from hydrogen production units on said vehicle, or from other sources external to said vehicle.
23. The vehicle of claim 1 further comprising a system to deliver oxygen produced or stored on said vehicle to locations outside said vehicle.

24. The vehicle of claim 1 further comprising a system for delivering pressurized hydrogen produced or stored on said vehicle to storage systems outside said vehicle.
25. The vehicle of claim 11 wherein said fuel processor comprises a reformer of a desired geometrical shape.
26. The vehicle of claim 11 wherein said fuel processor comprises a hydrogen purifier of a desired geometrical shape.
27. The vehicle of claim 25 or claim 26 wherein said shape is selected from the group consisting of tubular, flat, round, elliptical, and rectangular shapes.
28. The vehicle of claim 26 wherein said hydrogen purifier comprises a membrane of desired geometrical shape.
29. The vehicle of claim 26 wherein said hydrogen purifier comprises a support member and a membrane sealed to said support member.
30. The vehicle of claim 29 wherein said support member comprises

perforated surfaces, porous materials, or both.

31. The vehicle of claim 26 wherein said hydrogen purifier further comprises a purification system selected from the group consisting of a Pressure Swing Adsorption system, a Pressure Swing Temperature system, Preferential Oxidation system, and a Chemical Absorption system.
32. The vehicle of claim 1 wherein said vehicle is selected from the group consisting of a recreational vehicle, a marine vehicle, and a truck.
33. An enclosure comprises a fuel cell power system mounted on said enclosure for providing electrical power, heat and water to said enclosure, said enclosure comprising hydrogen-powered fuel cell mounted within said enclosure, a system for delivering relatively pure hydrogen to said fuel cell, a path to said fuel cell, a path from said fuel cell for delivering electrical power to said enclosure, a path from said fuel cell for delivering water to said enclosure, and the

path from said fuel for delivering heat to said enclosure.